



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,347	05/03/2001	Jae Young Park	K-282	6876

34610 7590 02/13/2004

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER

MEW, KEVIN D

ART UNIT	PAPER NUMBER
----------	--------------

2664

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/847,347

Applicant(s)

JAE PARK

Examiner

Kevin Mew

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2664

Detailed Action

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: element 500 in Figure 2. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7-9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuyasu et al. (US Patent 6,445,683) in view of Seta (US Publication 2002/0054611).

Regarding claim 1, Nobuyasu discloses a communication system (a **communication system**, see lines 37-39, col. 2 and Figure 2) which incorporates a base transceiver station (see element 11, Figure 2), a base station controller (see element 13, Figure 2) monitors the base transceiver station, and a BTS interface (an **apparatus for monitoring asynchronous transfer mode cells**, see element 21, Figure 2) in the base

Art Unit: 2664

station controller for monitoring ATM cells (see arrows coming into BTS interface of the base station controller, and lines 26-31, col. 6) by comprising:

an ATM terminating LSI (**receive interface part established in the base station controller**, see arrow coming in from BTS to T1 terminating LSI, to ATM terminating LSI, and element 21b, Figure 3) for temporarily store ATM cell in a FIFO memory (**recording a cell to be monitored**, see lines 19-21, col. 7), and for extracting an ATM cell from the payload of the T1 frame and checks the extracted ATM cell for an Header Error Control (**counting the number of error occurrence by checking header errors of the cells**, see lines 35-36, col. 6) error and filters the received cell according to a VPI/VCI value (**checking latched VPI/VCI of asynchronous transfer mode cells received from the base transceiver station by the base station controller**, see lines 36-37, col. 6).

Nobuyasu does not explicitly show a transmission interface part established in the base station controller for transferring a test cell for checking the transmission time between the base transceiver station and the base station controller to the base transceiver station.

However, Seta discloses a CDMA system (**a communication system**) for synchronizing the time of a plurality of base stations and the time of a base station controller that controls each of these base stations (see lines 3-6, section "0017", page 2) where the base station interface (BTS interface, see element 14, Figure 1) in a base station controller (**a transmission interface part established in the base station controller**, see element 1, Figure 1) performs a signal format conversion from the original communication signals into ATM cells (**transferring a test cell produced**, see

Art Unit: 2664

lines 11-13, section "0030", page 3 and lines 5-10, section "0056", page 5). Furthermore, Seta discloses a time controller (see element 15, Figure 1) for detecting the transmission time delay between the base station controller (see element 1, Figure 1) and the base stations periodically (**checking a cell transmission time between the base transceiver station and the base station controller to the base transceiver station**, see lines 10-12, section "0035", page 3 and elements 2, 3, Figure 1).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the communication system of Nobuyasu such that the communication system would comprise a transmission interface part to measure the transmission time delay between base station controller and base transceiver station such as the interface and the time controller of the base station controller taught by Seta. Having incorporated the base station controller (see element 1, Figure 3) of Seta, comprising an interface (see element 14, Figure 3) and a time controller (see element 15, Figure 3), into the transmission interface of Nobuyasu (see element 21, Figure 7) would modify the transmission BTS interface of Nobuyasu. The motivation to do so is to detect the transmission delay time between the base station controller and the base transceiver stations periodically and to create the time correction information using transmission delay time because it would allow synchronizing all base stations to absolute time accurately after the occurrence of a failure in a base station.

Regarding claim 7, Nobuyasu discloses all the aspects of the claimed invention as set forth in the rejection of claim 1 above, except fails to explicitly show a GPS receiver receives a time information packet from GPS and provides it to the receive and transmission parts; and a controller producing a test cell including a time information

Art Unit: 2664

provided by the GPS receiver or checking a cell transmission delay time by comparing transceiving time of a cell loop-backed from the base transceiver station.

However, Seta discloses a base station controller that includes:

a GPS receiver (see element 11, Figure 1) for generating a reference time and a clock signal (the time information packet) based upon a GPS signal received from GPS satellites (**a GPS receiver receiving a time information packet from GPS, the GPS receiver providing the receive and transmission parts with the time information packet**, see lines 1-3, section "0031", page 3);

an interface (see element 14, Figure 1) for synchronizing a timing signal with the reference time output by the GPS receiver (a time information provided by the GPS receiver, see lines 1-6, section "0034", page 3);

a base station controller (see lines 5-6, section "0034", page 3) for sending signals to the base stations, including the reference time information (**a controller producing a test cell including a time information provided by the GPS receiver**, see lines 7-9, section "0034", page 3); and

a time controller for detecting the transmission delay time between the base station controller and the base stations periodically (**checking a cell transmission delay time by comparing transceiving time of a cell loop-backed from the base transceiver station**, see lines 11-13, section "0034", page 3).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the communication system of Nobuyasu such that the communication system would comprise a GPS receiver for receiving GPS reference time information a time controller to measure the transmission time delay between base station

Art Unit: 2664

controller and base transceiver station such as the interface and the time controller of the base station controller taught by Seta. Having incorporated the base station controller (see element 1, Figure 3) of Seta, comprising a GPS receiver, an interface (see element 14, Figure 3) and a time controller (see element 15, Figure 3), into the transmission BTS interface of Nobuyasu (see element 21, Figure 7) would modify the transmission BTS interface of Nobuyasu. The motivation to do so is to provide a GPS receiver for receiving a reference time information for synchronizing base stations, and a controller for detecting the transmission delay time between the base station controller and the base transceiver stations periodically and for creating the time correction information using transmission delay time because it would allow synchronizing all base stations to absolute time accurately after the occurrence of a failure in a base station.

Regarding claim 8, Nobuyasu discloses all the aspects of the claimed invention as set forth in the rejection of claim 1 above, except fails to explicitly show timing information is provided in the receive and transmission parts when a test cell is transceived to and from the base station controller and the base transceiver station. However, Seta discloses that the base station controller measures the transmission delay time between the base station controller and the base stations based on the timing at which signals are transmitted to the base stations and the timing at which the corresponding signals are received from the base stations (see lines 5-9, section "0037", page 3). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the receive and transmission parts of the base station controller in the communication system of Nobuyasu such that the base station controller would measure the transmission time delay between base station controller and base

Art Unit: 2664

transceiver station such as the interface (see element 14, Figure 1) and the time controller of the base station controller (see element 1, Figure 1) taught by Seta. Having incorporated the base station controller (see element 1, Figure 3) of Seta, comprising an interface (see element 14, Figure 3) and a time controller (see element 15, Figure 3), into the BTS interface of Nobuyasu (see element 21, Figure 7) would modify the transmission BTS interface of Nobuyasu. The motivation to do so is to detect the transmission delay time between the base station controller and the base transceiver stations periodically and to create the time correction information using transmission delay time because it would allow synchronizing all base stations to absolute time accurately after the occurrence of a failure in a base station.

Regarding claim 9, Nobuyasu discloses a Channel Identifier (CID) latch for latching CID value (see line 2, and lines 8-9, col. 8 and element 45, Figure 6). A CID field value is essentially a VPI/VCI value (**VPI/VCI is latched with hardware**, see lines 29-31, col. 11, and lines 49-53, col. 12).

Regarding claim 11, Nobuyasu discloses all the aspects of the claimed invention as set forth in the rejection of claim 1 above, except fails to explicitly show multiplexing/demultiplexing ATM cells in the transmission and receiving parts of the base station controller. However, Seta discloses a multiplexer in the base station controller (see element 142, Figure 3) and a demultiplexer in the base station (see element 224, Figure 2). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the communication system of Nobuyasu such that the transmission and receiving parts of the base transceiver stations and base station controller would comprise a multiplexer/demultiplexer such as

Art Unit: 2664

multiplexer and demultiplexer taught by Seta. Having incorporated a multiplexer/demultiplexer in the base station controller or the base transceiver stations would modify the transmission and receiving parts of the base station controller of Nobuyasu. The motivation to do so is to provide a multiplexing/demultiplexing function for combining the reference time information and the time correction information onto, and extracting the reference time information and the time correction information from the original signals because the examining the reference timing information would allow synchronizing all base stations to absolute time accurately after the occurrence of a failure in a base station.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuyasu in view of Seta, and in further view of Lee et al. (US Publication 2001/0006516).

Regarding claim 10, Nobuyasu discloses a T1 interface between the base transceiver station and the base station controller (see element 21a, Figure 3). Nobuyasu does not explicitly show a E1 interface between the base transceiver station and the base station controller. However, Lee discloses a E1/T1 interface between base transceiver stations (see element 10, Figure 1) and base station controller (see element 200, Figure 1). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the communication system of Nobuyasu such that the interface between base transceiver stations and base station controller is an E1 interface such as the E1 interface taught by Lee. Having replaced the North America T1 interface standard with the European interface standard between base transceiver stations and base station controller would modify the interface standard of Nobuyasu. The motivation to

Art Unit: 2664

do so is to support the European interface standard between base transceiver stations and base station controller because a different information transmission rate set forth by the E1 interface standard is required to support the corresponding European implementation of the system.

Allowable Subject Matter

4. Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record fails to teach the subject matter of claim 2 including:

a second storage part outputting a data corresponding to the latched VPI/VCI of the cell;

a third storage part outputting a VPI index value of an address designated by the data outputted from the second storage part; and

a fourth storage part storing the number of error occurrence of the cell at the other address designated by the VPI index value.

Art Unit: 2664

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure with respect to monitoring ATM cells in wireless communications.

US Patent 6,009,086 to Freeburg et al.

US Patent 6,570,856 to Freeburg et al.

US Patent 6,678,256 to Sato

US Patent 6,477,154 to Cheong et al.

US Patent 6,512,747 to Umeuchi et al.

US Patent 5,729,536 to Doshi et al.

US Patent 6,591,150 to Shirota

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 703-305-5300.

The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


RICKY NGO
PRIMARY EXAMINER

KDM
Art Unit 2664